

**Notice of Allowability**

Application No.

10/632,893

Examiner

Phillip A. Johnston

Applicant(s)

CEKIC ET AL.

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to appeal brief filed 10-20-2006.
2. ☒ The allowed claim(s) is/are 1-7 and 9-79.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 3-29-2007.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

***Detailed Action***

1. This action is in response to the appeal brief filed 10-20-2006, wherein claims 1-79 are pending.

***Examiners Amendment***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James Boyle on 3-21-2007. The changes made below are underlined.

The Claims are amended as follows;

-- Claim 1. Apparatus for treating a volume of fluid, said apparatus comprising:  
a fluid passageway through which the fluid flows; at least one source of irradiation, external to said fluid passageway; at least two reflecting troughs, each trough having a curved cross section, with a closed end, top and bottom edges, and an open end, the open end of each trough having first and second end edges, the open end of said first trough facing the open end of said second trough to define a space between the closed ends of said troughs, the top edges of said first and second troughs defining a first plane, and the bottom edges of said first and second troughs defining a second plane; a first set of reflectors joining the end edges of said first trough to the end edges of said second trough, each reflector of said first set of reflectors having a top edge lying substantially in the first plane and a bottom edge lying substantially in the second

plane; and a second set of reflectors joining the top edges of said troughs and of said first set of reflectors and joining the bottom edges of said troughs and of said first set of reflectors, said second set of reflectors cooperating with said troughs and said first set of reflectors to define a substantially enclosed chamber having said at least one source of irradiation therein and having said fluid passageway passing therethrough, wherein: each source of irradiation is within a respective one of said troughs, and at least one of said fluid passageway and said at least one source of irradiation is spaced from all focal axes of said troughs so as to provide a substantially uniform irradiation distribution within the fluid in said fluid passageway, wherein each trough has a longitudinal axis, and wherein each reflector of said first set of reflectors is segmented and comprises: a first flat reflector segment extending from a first one of said troughs at an angle to the longitudinal axis of such trough; and a second flat reflector segment extending from a second one of said troughs at an angle to the longitudinal axis of that trough and cooperating with said first flat reflector segment to define a V substantially midway between said troughs. --

-- Claim 9. Apparatus according to claim 1, wherein the V forms an angle of substantially 90°. --

Cancel claim 8

***Allowable Subject Matter***

3. Claims 1-7, and 9-79 are allowed

***Examiner's statement of reasons for allowance***

The following is an examiner's statement of reasons for allowance:

4. Claim 1 is allowed because prior art fails to show an apparatus for treating a volume of fluid, that includes a fluid passageway through which the fluid flows; at least one source of irradiation, external to the fluid passageway; at least two reflecting troughs, and each trough having a curved cross section, first and second sets of reflectors cooperating with the troughs where the first set of reflectors define an enclosed chamber having at least one source of irradiation therein and having a fluid passageway passing there-through. The at least one source of irradiation is spaced from all focal axes of the troughs so as to provide a substantially uniform irradiation distribution within the fluid in the fluid passageway. In addition each reflector is segmented such that one first flat reflector segment extends from one of the troughs at an angle to the longitudinal axis of such trough; and a second flat reflector segment extends from a second trough at an angle to the longitudinal axis of that trough and cooperating with the first flat reflector segment to define a V substantially midway between the troughs.

5. Claims 2-7, and 9-79 are allowed by virtue of their dependency upon allowed claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

6. Any inquiry concerning this communication or earlier communications should be directed to Phillip Johnston whose telephone number is (571) 272-2475. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor Robert Kim can be reached at (571) 272-2293. The fax phone number for the organization where the application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJ  
March 29, 2007



NIKITA WELLS  
PRIMARY EXAMINER

04/02/07